

Q2 2019 Earnings Preview

North America Power & Utilities, Alternative Energy, and Environmental Services

Equities

North America

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Regulated Utilities:

Our Q2'19 EPS estimates are 3% below consensus and 3% below Q2'18. Weather conditions were below normal in every region of the country with the upper Midwest and West most impacted (CMS, EVRG, PNM, PNW) although conditions in the Southern U.S. improved YoY which we expect helped ETR exceed consensus, and should also be helpful to NEE and SO. Due to the timing of rate case revenue EIX likely also beat consensus and the company could discuss their contribution to the wildfire insurance fund and the legislation on their call. Canadian utilities likely miss consensus with mild weather for CU, FTS and H, and EMA capped on ROE in NS despite better weather.

Power:

Our expectations for Adj. EBITDA are similar to 1Q where we see NRG results of \$486mln below current consensus due to annual estimates not being seasonally weighted enough to 3Q, whereas we see VST results of \$718mln above consensus due to estimates not being seasonally weighted enough away from 3Q. Overall results should not be significantly impacted by the lower power prices year on year as NRG was 93%/82% hedged in ERCOT/PJM as of the 1Q call and VST was 100% hedged to natural gas and 94% hedged to heat rate in ERCOT and 94%-95% hedged in the northeast as of the 1Q call. Despite forward curves being lower management should discuss on the call the offsetting effects of expanding retail margins. In addition to discussion of these sensitivities, investors are likely to focus on integration of the Cirus acquisition for VST, implementation of the retail lite strategy for NRG, and any updates on target leverage and use of FCF, as well as the upcoming PJM capacity auction.

Alternative Energy: Waiting for 2H19

We expect muted 2Q19 results given most companies in the space point towards a 2H19 ramp in demand and earnings. 2Q19 should be a small loss for FSLR (Buy) before the ramp in Series 6 volume and transition cost declines. 2H19E adj. EPS of \$3.18/sh compares to 1H19E adj. loss per share of \$0.67/sh. Similarly, we expect TPIC (Buy) y/y EBITDA ramp to begin in 3Q19 as 1H19 was impacted by one-off labor and production issues. We see potential upward guidance revisions for 2019 module shipments, particularly for the Chinese exposed names CSIQ and JKS.

Environmental Services: Headwinds make 2019 guidance increases unlikely

We expect the focus to be on two headwinds: 1) a 64% YTD decline in recycled fiber pricing and 2) a 10% YTD decline in Permian Basin E&P rig count. However, 2019 guidance is likely to be maintained across the group, in our view, driven by strong core MSW price and volume and incremental M&A offsetting the commodity headwinds. WCN (Buy) remains our top pick.

Figure 1: Electric Utilities Universe

Rating	Ticker	Company	7/19/2019 Price	Price Target	Total Return inc Div. Yld	UBS 2018A EPS	UBS 2019E EPS	UBS 2020E EPS	UBS 2021E EPS	2020 P/E Ratio	2020 Prem/ Disc	2021 P/E Ratio	2021 Prem/ Disc	Current Dividend Yield	5 Yr EPS Growth	5 Yr DPS Growth	Regulatory Quartile
Neutral (CBE)	PG&E	PG&E Corp	\$17.79	\$24	35%	\$4.00	\$3.27	\$1.90	\$2.39	9.4x	(53%)	7.4x	(60%)	0.0%	-4.9%	0.0%	4th
Buy	ACO	ATCO Ltd. (CS)	\$43.29	\$54	28%	\$3.10	\$3.22	\$3.29	\$3.43	13.2x	(32%)	12.6x	(30%)	3.7%	3.8%	6.1%	4th
Buy	PPL	PPL Corporation	\$30.17	\$36	25%	\$2.38	\$2.40	\$2.54	\$2.52	11.9x	(40%)	12.0x	(36%)	5.5%	3.1%	0.9%	2nd
Buy	DUK	Duke Energy	\$88.45	\$105	23%	\$4.72	\$4.97	\$5.27	\$5.57	16.8x	(16%)	15.9x	(15%)	4.3%	5.2%	2.0%	1st
Buy	EXC	Exelon	\$47.57	\$56	21%	\$3.12	\$3.19	\$3.14	\$3.14	15.1x	(24%)	15.2x	(19%)	3.0%	1.7%	5.3%	3rd
Buy	D	Dominion Energy	\$76.85	\$89	21%	\$4.05	\$4.22	\$4.40	\$4.65	17.5x	(12%)	16.5x	(11%)	4.8%	5.2%	4.3%	1st
Buy	FE	FirstEnergy Corp	\$43.49	\$50	18%	\$2.60	\$2.47	\$2.53	\$2.60	17.2x	(14%)	16.7x	(10%)	3.5%	1.9%	3.7%	2nd
Buy	NEE	NextEra Energy	\$209.73	\$240	17%	\$7.70	\$8.43	\$9.08	\$9.84	23.1x	16%	21.3x	14%	2.4%	7.9%	10.0%	1st
Buy	PEG	Public Service Ent Group	\$60.18	\$68	16%	\$3.12	\$3.22	\$3.62	\$3.54	16.6x	(16%)	17.0x	(9%)	3.1%	5.2%	5.0%	2nd
Buy	FTS	Fortis Inc (CS)	\$51.62	\$58	16%	\$2.51	\$2.54	\$2.73	\$2.93	18.9x	(2%)	17.6x	(3%)	3.5%	6.1%	6.0%	3rd
Buy	ES	Eversource Energy	\$76.77	\$86	15%	\$3.25	\$3.46	\$3.67	\$3.87	20.9x	5%	19.8x	6%	2.8%	5.9%	5.9%	2nd
Buy	AEP	American Electric Power	\$90.28	\$100	14%	\$3.94	\$4.10	\$4.39	\$4.75	20.5x	3%	19.0x	2%	3.0%	6.1%	7.0%	1st
Neutral	CU	Canadian Utilities Ltd (CS)	\$35.80	\$39	14%	\$2.24	\$2.21	\$2.28	\$2.38	15.7x	(18%)	15.1x	(17%)	4.6%	3.0%	5.4%	4th
Neutral	ED	Consolidated Edison	\$87.24	\$96	13%	\$4.33	\$4.33	\$4.70	\$4.87	18.6x	(7%)	17.9x	(4%)	3.4%	4.7%	3.0%	4th
Buy	EIX	Edison International	\$70.17	\$77	13%	\$4.09	\$4.49	\$4.36	\$4.58	16.1x	(19%)	15.3x	(18%)	3.5%	3.4%	0.2%	4th
Neutral	PNW	Pinnacle West Capital Corp	\$93.59	\$103	13%	\$4.54	\$4.94	\$5.28	\$5.60	17.7x	(11%)	16.7x	(10%)	3.2%	6.9%	6.0%	4th
Neutral	DTE	DTE Energy	\$128.79	\$141	12%	\$6.30	\$6.29	\$6.56	\$6.96	19.6x	(1%)	18.5x	(1%)	2.9%	4.8%	7.0%	1st
Buy	ETR	Entergy Corp	\$105.60	\$115	12%	\$6.29	\$5.30	\$5.51	\$5.82	19.2x	(3%)	18.1x	(3%)	3.4%	-0.1%	2.3%	2nd
Buy	EMA	Emera Inc (CS)	\$54.02	\$58	12%	\$2.87	\$2.79	\$2.82	\$3.02	19.1x	(1%)	17.9x	(1%)	4.4%	3.5%	4.3%	1st
Neutral	AEE	Ameren Corp	\$75.98	\$83	12%	\$3.37	\$3.25	\$3.52	\$3.92	21.6x	9%	19.4x	4%	2.5%	5.4%	6.0%	2nd
Buy	SRE	Sempra Energy	\$140.05	\$150	10%	\$5.57	\$5.89	\$6.99	\$7.55	20.0x	1%	18.6x	(0%)	2.8%	8.9%	8.1%	3rd
Neutral	SO	Southern Company	\$55.27	\$58	9%	\$3.07	\$3.03	\$3.22	\$3.36	17.2x	(13%)	16.5x	(12%)	4.5%	4.0%	3.2%	1st
Neutral	OGE	OGE Energy Corp	\$42.74	\$45	9%	\$2.12	\$2.11	\$2.33	\$2.45	18.3x	(8%)	17.5x	(6%)	3.4%	4.3%	7.0%	3rd
Neutral	CUP	Caribbean Utilities Corp Ltd	\$16.35	\$17	8%	\$0.78	\$0.82	\$0.85	\$0.93	19.1x	(1%)	17.6x	(3%)	4.3%	6.7%	5.7%	3rd
Neutral	AES	AES Corp.	\$17.22	\$18	8%	\$1.22	\$1.33	\$1.46	\$1.61	11.8x	(41%)	10.7x	(43%)	3.2%	8.0%	6.0%	2nd
Neutral	CMS	CMS Energy	\$58.26	\$61	7%	\$2.33	\$2.51	\$2.68	\$2.90	21.7x	9%	20.1x	8%	2.6%	6.8%	7.0%	1st
Neutral	XEL	Xcel Energy	\$60.77	\$63	6%	\$2.47	\$2.60	\$2.77	\$2.95	22.0x	11%	20.6x	10%	2.7%	5.7%	6.0%	2nd
Neutral	WEC	WEC Energy Group	\$86.31	\$87	4%	\$3.34	\$3.54	\$3.74	\$3.97	23.1x	16%	21.8x	17%	2.7%	6.0%	6.2%	1st
Neutral	EVRG	Evergy	\$60.79	\$61	3%	\$2.67	\$2.83	\$3.07	\$3.27	19.8x	(0%)	18.6x	(0%)	3.1%	5.7%	6.2%	3rd
Neutral	PNM	PNM Resources	\$49.62	\$50	3%	\$2.00	\$2.16	\$2.24	\$2.38	22.2x	12%	20.8x	12%	2.3%	5.0%	9.3%	4th
Neutral	LMT	Alliant Energy	\$49.93	\$49	1%	\$2.19	\$2.26	\$2.49	\$2.56	20.1x	1%	19.5x	5%	2.8%	4.6%	6.0%	2nd
Sell	POR	Portland General	\$54.61	\$52	(2%)	\$2.37	\$2.48	\$2.60	\$2.74	21.0x	6%	20.0x	7%	2.8%	5.0%	6.0%	3rd
Sell	H	Hydro One Ltd (CS)	\$23.34	\$21	(6%)	\$1.35	\$1.35	\$1.30	\$1.34	18.0x	(10%)	17.4x	(7%)	4.2%	2.5%	4.7%	4th
Sell	HE	Hawaiian Electric Industries	\$44.31	\$35	(18%)	\$1.85	\$1.95	\$2.05	\$2.16	21.6x	9%	20.5x	10%	2.9%	5.0%	3.2%	4th
Overall Average (unnormalized, inc. Gas Midstream)										18.8x		17.8x					
Electric Utility Normalized (including Gas Midstream)										19.9x		18.6x					

Source: FactSet, UBS Equity Research

Figure 2: Water Utilities Universe

Rating	Ticker	Company	7/19/2019 Price	UBS Price Target	Total Return inc. Div. Yld	UBS 2018A EPS	UBS 2019E EPS	UBS 2020E EPS	UBS 2021E EPS	2021E P/E Ratio	2021E Prem/ Disc	Current Dividend Yield	5 Yr EPS Growth	DPS Growth
Buy	AWK	American Water	\$114.98	\$123	9%	\$3.30	\$3.57	\$3.85	\$4.17	27.5x	0%	1.6%	8.2%	10.0%
Neutral	SJW	SJW Group	\$64.77	\$64	1%	\$2.51	\$2.14	\$2.34	\$2.49	26.0x	(5%)	1.9%	2.6%	7.0%
Buy	WTR	Aqua America	\$41.00	\$42	5%	\$1.41	\$1.48	\$1.58	\$1.68	24.5x	(11%)	2.1%	6.4%	7.0%
Sell	CTWS	Connecticut Water Service	\$69.57	\$67	(2%)	\$2.29	\$2.39	\$2.53	\$2.77	25.1x	(8%)	1.8%	6.7%	5.0%
Sell	CWT	California Water Service	\$52.60	\$44	(15%)	\$1.44	\$1.39	\$1.61	\$1.70	30.9x	13%	1.5%	5.7%	5.0%
Sell	AWR	American States Water	\$76.02	\$57	(24%)	\$1.73	\$1.98	\$2.08	\$2.20	34.6x	26%	1.4%	7.8%	6.0%
AVERAGE										27.4x				

Source: FactSet, UBS Equity Research

Figure 3: Independent Power Producers

Rating	Ticker	Company	7/19/2019 Price	Price Target	Total Return inc Div. Yld	UBS 2018A EBITDA	UBS 2019E EBITDA	UBS 2020E EBITDA	UBS 2021E EBITDA	2020 EV/ EBITDA Ratio	2020 Prem/ Disc	2021 EV/ EBITDA Ratio	2021 Prem/ Disc	2019E Net Debt/ EBITDA
Buy	VST	Vistra Energy Corp	\$21.83	\$35	63%	\$2,760	\$3,292	\$3,212	\$2,654	5.4x	(25%)	6.1x	(10%)	2.9x
Buy	NRG	NRG Energy	\$35.14	\$46	31%	\$2,001	\$1,970	\$1,821	\$1,906	5.8x	(20%)	5.2x	(24%)	2.2x
MID-CYCLE MEDIAN										7.2x		6.8x		

Source: FactSet, UBS Equity Research

Figure 4: Regulated Utilities & Power 2Q19 Earnings Summary

U.S. companies in US\$ Cdn companies in C\$		Quarterly						Annual				
CUP in US\$		Scheduled Reporting Date	2Q19E UBS	2Q19E Consensus	UBS Vs. Consensus	UBS Confidence Indicator ¹	2Q18A Adjusted	2019E UBS	2019E Consensus	UBS Vs. Consensus	Trailing 12 Month	2019E Guidance
Company	Ticker											
ELECTRIC UTILITIES												
AES Corp	AES	6-Aug	\$0.25	\$0.28	(\$0.03)		\$0.25	\$1.33	\$1.33	(\$0.00)	\$1.22	\$1.28-\$1.40
ATCO Ltd	ACO.x-TSE	25-Jul	\$0.61	\$0.61	(\$0.00)		\$0.53	\$3.22	\$3.11	\$0.11	\$3.29	N/A
Alliant Energy	LNT	1-Aug	\$0.43	\$0.45	(\$0.02)		\$0.43	\$2.26	\$2.25	\$0.00	\$2.19	\$2.17-\$2.31
Ameren Corp	AEE	2-Aug	\$0.75	\$0.78	(\$0.03)		\$0.97	\$3.25	\$3.26	(\$0.01)	\$3.31	\$3.15-\$3.35
American Electric Power	AEP	25-Jul	\$0.97	\$0.99	(\$0.02)		\$1.01	\$4.10	\$4.13	(\$0.03)	\$4.14	\$4.00-\$4.20
Canadian Utilities Ltd	CU-TSE	25-Jul	\$0.40	\$0.43	(\$0.03)		\$0.39	\$2.21	\$2.18	\$0.03	\$2.31	N/A
Caribbean Utilities Corporation Ltd	CUP.USD-TSE	2-Aug	\$0.21	\$0.21	\$0.00		\$0.21	\$0.82	\$0.79	\$0.02	\$0.84	N/A
CMS Energy	CMS	25-Jul	\$0.32	\$0.46	(\$0.14)		\$0.48	\$2.51	\$2.50	\$0.01	\$2.05	\$2.47-\$2.51
Consolidated Edison	ED	1-Aug	\$0.54	\$0.59	(\$0.05)		\$0.61	\$4.33	\$4.35	(\$0.02)	\$4.27	\$4.25-\$4.45
Dominion Energy	D	31-Jul	\$0.76	\$0.79	(\$0.03)		\$0.86	\$4.22	\$4.19	\$0.03	\$3.91	\$4.05-\$4.40
DTE Energy	DTE	24-Jul	\$1.17	\$1.20	(\$0.03)		\$1.36	\$6.29	\$6.24	\$0.05	\$6.29	\$5.97-\$6.33
Duke Energy	DUK	6-Aug	\$0.98	\$0.98	\$0.00		\$0.93	\$4.97	\$4.92	\$0.06	\$4.71	\$4.80-5.20
Edison International	EIX	25-Jul	\$1.21	\$1.09	\$0.12		\$0.85	\$4.49	\$4.67	(\$0.18)	\$4.31	\$4.72-\$4.92
Emera Inc	EMA-TSE	12-Aug	\$0.52	\$0.55	(\$0.03)		\$0.48	\$2.79	\$2.85	(\$0.07)	\$2.98	N/A
Entergy Corp	ETR	31-Jul	\$1.40	\$1.36	\$0.04		\$0.83	\$5.30	\$5.29	\$0.02	\$6.57	\$5.10-\$5.50
Eversource Energy	ES	31-Jul	\$0.78	\$0.75	\$0.03		\$0.76	\$3.46	\$3.46	(\$0.00)	\$3.39	\$3.40-\$3.50
Exelon Corp	EXC	1-Aug	\$0.59	\$0.65	(\$0.06)		\$0.71	\$3.19	\$3.14	\$0.05	\$2.92	\$3.00-\$3.30
FirstEnergy Corp	FE	23-Jul	\$0.58	\$0.61	(\$0.03)		\$0.62	\$2.47	\$2.51	(\$0.04)	\$2.55	\$2.45-\$2.75
Fortis Inc	FTS-TSE	2-Aug	\$0.56	\$0.61	(\$0.05)		\$0.59	\$2.54	\$2.62	(\$0.08)	\$2.51	N/A
Hawaiian Electric Industries	HE	2-Aug	\$0.44	\$0.45	(\$0.01)		\$0.42	\$1.95	\$1.95	\$0.00	\$1.92	\$1.85-\$2.05
Hydro One Ltd	H-TSE	9-Aug	\$0.26	\$0.29	(\$0.03)		\$0.33	\$1.35	\$1.46	(\$0.12)	\$1.37	N/A
NextEra Energy	NEE	24-Jul	\$2.31	\$2.29	\$0.02		\$2.11	\$8.43	\$8.40	\$0.03	\$8.18	\$8.00-\$8.50
OGE Energy Corp	OGE	8-Aug	\$0.52	\$0.52	(\$0.00)		\$0.55	\$2.11	\$2.14	(\$0.03)	\$2.05	\$2.05-\$2.20
PG&E Corp	PCG	26-Jul	\$1.16	\$0.99	\$0.17		\$1.16	\$3.27	\$3.81	(\$0.54)	\$4.13	N/A
Pinnacle West Capital Corporation	PNW	8-Aug	\$1.37	\$1.55	(\$0.18)		\$1.48	\$4.94	\$4.85	\$0.09	\$4.56	\$4.75-\$4.95
PNM Resources	PNM	2-Aug	\$0.37	\$0.49	(\$0.12)		\$0.53	\$2.16	\$2.12	\$0.04	\$1.77	\$2.10-\$2.18
Portland General	POR	2-Aug	\$0.52	\$0.51	\$0.01		\$0.51	\$2.48	\$2.45	\$0.03	\$2.48	\$2.35-\$2.50
PPL Corporation	PPL	6-Aug	\$0.55	\$0.58	(\$0.03)		\$0.55	\$2.40	\$2.43	(\$0.03)	\$2.36	\$2.30-\$2.50
Public Service Enterprise Group	PEG	30-Jul	\$0.58	\$0.64	(\$0.06)		\$0.64	\$3.22	\$3.26	(\$0.03)	\$3.17	\$3.15-\$3.35
Sempra Energy	SRE	2-Aug	\$1.17	\$1.21	(\$0.04)		\$1.35	\$5.89	\$6.04	(\$0.15)	\$5.89	\$5.70-\$6.30
Southern Company	SO	31-Jul	\$0.72	\$0.72	\$0.00		\$0.80	\$3.03	\$3.02	\$0.01	\$2.81	\$2.98-\$3.10
WEC Energy Group	WEC	5-Aug	\$0.70	\$0.72	(\$0.02)		\$0.73	\$3.54	\$3.51	\$0.02	\$3.41	\$3.48-\$3.52
Xcel Energy	CEL	1-Aug	\$0.52	\$0.54	(\$0.02)		\$0.52	\$2.60	\$2.62	(\$0.02)	\$2.51	\$2.55-\$2.65
Average			\$0.73	\$0.75	(\$0.02)		\$0.75	\$3.35	\$3.38	(\$0.02)	\$3.32	
WATER UTILITIES												
American States Water Company	AWR	TBA	\$0.58	\$0.55	\$0.03		\$0.44	\$1.98	\$1.97	\$0.01	\$1.73	N/A
American Water Works Company	AWK	31-Jul	\$0.89	\$0.93	(\$0.04)		\$0.83	\$3.57	\$3.59	(\$0.02)	\$3.31	\$3.54-\$3.64
Aqua America	WTR	6-Aug	\$0.32	\$0.38	(\$0.06)		\$0.37	\$1.48	\$1.39	\$0.09	\$1.40	\$1.45-\$1.50
California Water Service Group	CWT	1-Aug	\$0.41	\$0.37	\$0.04		\$0.37	\$1.39	\$1.40	(\$0.02)	\$1.53	N/A
Connecticut Water Service	CTWS	TBA	\$0.68	\$0.68	\$0.00		\$0.59	\$2.39	\$2.36		\$2.22	N/A
SJW Group	SJW	24-Jul	\$0.63									
Average			\$0.59	\$0.58	(\$0.00)		\$0.52	\$2.16		\$0.02		
IPPS - Adjusted EBITDA not EPS US\$mlns												
NRG Energy	NRG	7-Aug	\$486	\$597	(\$111)		\$517	\$2,010	\$2,023	(\$13)	N/A	\$1,850-\$2,050
Vistra Energy	VST	2-Aug	\$718	\$688	\$30		\$653	\$3,210	\$3,347	(\$137)	N/A	\$3,220-\$3,420

1. UBS Confidence Indicator: Green = high confidence in estimate vs. consensus; Red = low confidence in estimate vs. consensus; Yellow = mid confidence in estimate vs. consensus

2. Not meaningful. UBS estimate and company guidance reflect UPO-only earnings.

3. UBS estimates reflected above remove the estimated NRG Yield assets results from prior and current quarter and consensus for comparison purposes as they were sold on 8/31/18

Source: FactSet, company filings, UBS Equity Research

Regulated Utilities 2Q19 preview

Key Calls this Quarter

AES Corp. We expect a discussion of development in Vietnam of 450 TBTU of LNG capacity and 2 GW of combined cycle gas or projects totalling \$3B. The projects could come on-line in the 2023-2025 timeline. AES would look to use partner equity in the project while still growing net income up to \$100M in our estimation.

Alliant Energy. With intervenor testimony in the IP&L rate case 8/1 the company may be in a position to comment. An update on 2020 equity needs will wait until the third quarter call.

Ameren Corp. We expect a discussion on Missouri renewables and financing needs. We raised our assumption for 2019 equity need to \$700M from \$500M due to the acquisition of an incremental 400 MW if wind.

American Electric Power. Management could discuss the North Central Wind Energy facilities at SWEPCO and PSO which total 1,485 MW and represent \$2B in rate base. The company could use up to 50% equity to finance these projects which would provide for \$0.07-\$0.10/share of accretion. Another topic is the numerous rate cases in which the company is involved including Arkansas, Indiana, Michigan, and Texas.

CMS Energy. Despite a light Q2'19 (\$0.32E versus \$0.48 last year) we believe there is a reasonable bridge to 2019 guidance of \$2.47-\$2.51 due to the absence of reinvestment spending in 2018 which could add \$0.23/share along with contingency.

DTE Energy. We look for a discussion of how the company thinks about the company's 5 year forecast at the Gas, Pipelines & Storage segment and plans to spend \$4-\$5B.

Edison International. With wildfire legislation having passed in California the company could raise its forecast of capital needs for its contribution to the wildfire insurance fund from the \$1.5B equity need discussed on the first quarter call. EIX stands out as one of the potential beats versus consensus due to \$0.22/share of rate relief.

Emera Inc. We expect EMA to spend time on the call on August 12 discussing the Maine intervenor testimony filed in the pending EmeraMaine sale to ENMAX at the Maine Public Service Commission on August 5 and provide an update on the process.

FirstEnergy. We expect FE to maintain 2019 EPS guidance of \$2.45-\$2.75 but following a Ohio Supreme Court decision they are collecting the Distribution Modernization Rider subject to refund.

OGE Energy. We expect investors to revive the issue of dividend payout although we do not necessarily expect news beyond the previously stated policy of 10% annual growth in the dividend through 2019.

Weather

Weather was broadly milder year over year in the second quarter, with weather in all regions below normal and the country 4% below normal on degree days. Regionally the West North Central Region, Middle Atlantic, and East North Central region experienced the fewest degree days versus normal for the quarter, while the Pacific region and the Southeast had the closest to normal weather experience. Year over year, the Middle Atlantic, Mountain, Pacific, and East North Central regions were down the most, while the East & West South Central regions were actually better year on year and the West North Central region was flat.

Figure 5: 2Q19 Regional Degree Days

Q2'19 Degree Days (April , May, June)	2Q19	2Q18	2Q Normal	2Q19 vs. 2Q18	2Q19 vs. Normal
New England	927	966	1,055	-4%	-12%
Middle Atlantic	749	885	945	-15%	-21%
East North Central	858	961	1,072	-11%	-20%
West North Central	947	951	1,232	0%	-23%
South Atlantic	883	747	900	18%	-2%
East South Central	809	758	960	7%	-16%
West South Central	961	880	1,073	9%	-10%
Mountain	756	886	823	-15%	-8%
Pacific	693	811	741	-15%	-6%
United States	4,882	4,778	5,073	2%	-4%

Source: NOAA, UBS

We also looked at the states that had the biggest shifts in year-on-year weather. We sorted them on the largest percentage change although 2Q degree days are not that significant in some areas.

Figure 6: Top 10/Bottom 10 States' Change in Degree Days

Q2'19 Degree Days	2Q19	2Q18	2Q Normal	2Q19 vs. 2Q18	2Q19 vs. Normal
Oregon	62	47	29	32%	114%
Washington	62	53	28	17%	121%
Delaware	436	373	264	17%	65%
Alabama	771	697	568	11%	36%
Maryland	407	368	263	11%	55%
Florida	1,234	1,120	1,010	10%	22%
Louisiana	959	894	838	7%	14%
Georgia	713	678	516	5%	38%
Mississippi	776	743	657	4%	18%
South Carolina	760	737	550	3%	38%
Kansas	323	590	395	-45%	-18%
Utah	94	173	144	-46%	-35%
Illinois	193	356	256	-46%	-25%
North Dakota	108	203	124	-47%	-13%
Minnesota	115	232	143	-50%	-20%
Wyoming	33	74	60	-55%	-45%
Colorado	59	155	60	-62%	-2%
Michigan	69	182	156	-62%	-56%
Wisconsin	61	182	133	-66%	-54%
Maine	6	25	29	-76%	-79%

Source: NOAA, S&P Global Market Intelligence, UBS

Electric Utilities

- **AES.** We expect flat EPS in Q2'19 at \$0.25 and the company's growth to be more back-end loaded this year with OPGC II in India coming on line in the second quarter and renewable capacity funded by tax equity in the fourth quarter. Otherwise the Changuinola outage in Panama is a negative driver though in guidance as are asset sales. On the positive side we expect similar drivers to Q1'19 like cost cuts, the Dominican Republic and the U.S. utilities. Despite a light first half AES is in position to make the full year due to start-ups of new renewable capacity primarily in the United States and of the OPGC II coal plant in India.

Figure 7: AES 2019 Earnings Drivers

	2019E	Q1'19A	Q2'19E	Q3'19E	Q4'19E	Comments
Prior Year Start		\$0.28	\$0.25	\$0.35	\$0.36	
Asset Sales		-\$0.04	-\$0.03	-\$0.01	-\$0.01	
Tax rate		\$0.01	\$0.01	\$0.00	-\$0.01	30% for the year
Dominican Republic				\$0.02		Absence of outage
Argentina			-\$0.01			
Panama			-\$0.01			Hydro, outage
Panama, Colon				\$0.01	\$0.01	Tank vs. floating storage
OPGC II			\$0.01	\$0.01	\$0.01	Start-up of operations
Renewables				\$0.03	\$0.03	Start-up of operations
Parent Interest		\$0.01	\$0.01			
SBUSs Other		\$0.02				
Sensitivities, FX			\$0.01	\$0.01		Interest rates
Other			\$0.01			
UBS 2019 Forecast	\$1.33	\$0.28	\$0.25	\$0.42	\$0.39	
Tax rate 2018			36%	28%	24%	

Source: Company reports, Factset, UBS Equity Research

- **ACO.** We see ATCO Ltd earnings in line with 2Q'18 at C\$0.61. Year over year earnings drivers will be from the S&L business segment where seasonally the largest contributions are in the 2nd and 4th quarters. S&L growth to the full year run rate is expected to be more back-end loaded in 2019 due to the ramp at construction facilities as work force has begun ramping up in the quarter. Year on year, earnings are likely to be higher at S&L vs. 2Q'18 related to the close of the Mexico acquisition in late February. The production factory in Chile was completed in 2Q'18 and could contribute year over year. Sanctioning of new projects related to LNG Canada, Coastal GasLink, and the Silvertip Mine, among others are still ramping up and likely to contribute more in the back half of the year vs. the 2Q. The Naltume Ports acquisition was closed in September 2018 and will be a year on year contributor at the expected run rate of about C\$4m/qtr. Given the ownership stake in Canadian Utilities, earnings will also be impacted by the drivers discussed for that company, which are provided below.
- **LNT.** We see LNT's Q2'19 EPS flat at \$0.43 versus \$0.43 in Q2'18. The absence of above normal weather in Q2'18 is -6 cents and weather was below normal this year. Rate relief at WP&L should add 5 cents and interim rate relief at IP&L could add 8 cents. IP&L wind going into service at the end of March could add 2 cents. Negative drivers are depreciation and interest expense including \$600M at IP&L at rates of 3.0-3.6%.

Figure 8: LNT Q2'19 EPS Drivers

	Q2'19E	Q1'19A	Q2'18A
IP&L	\$0.26	\$0.23	\$0.22
WP&L	<u>\$0.19</u>	<u>\$0.28</u>	<u>\$0.17</u>
Utils & Corp	\$0.45	\$0.52	\$0.41
ATC	\$0.03	\$0.03	\$0.03
Non-utility	-\$0.03	-\$0.02	-\$0.01
Total	\$0.43	\$0.53	\$0.43
Shares MM	238	237	232
Q2'18	\$0.43		
Weather to normal	-\$0.06		
Weather below normal	-\$0.02		
IP&L interim rates	\$0.08		
WP&L rates	\$0.05		
IP&L wind in service	\$0.02		
IP&L depreciation	-\$0.02		
Interest expense-unregulated	-\$0.02		
Interest expense-regulated	-\$0.02		
Q2'19	\$0.43		

Source: Company reports, Factset, UBS Equity Research

- **AEE.** We look for a decline in AEE's EPS in Q2'19 to \$0.75 from \$0.97. A normalized Q2'18 is \$0.74 with normal weather (-\$0.19/share), Callaway outage timing (-\$0.09/share) and Missouri taxation (+\$0.04/share). Otherwise we see \$0.02 from Ameren Transmission rate base growth and \$0.03 from Ameren Illinois Electric and Gas growth offset by -\$0.04 for below normal June weather in Missouri and other expenses of -\$0.02/share.

Figure 9: AEE Q2'19 EPS Drivers

Q2'18	\$0.97
Weather to normal (10 year not 30 year average)	-\$0.19
Callaway	-\$0.08
Missouri taxation	\$0.04
Normalized Prior Year	\$0.74
<u>Q2'19 Drivers</u>	
Ameren Transmission rate base	\$0.02
Ameren Illinois rate base	\$0.03
Ameren Illinois electric ROE impact	-\$0.01
Below normal weather, other	-\$0.04
Q2'19	\$0.75

Source: Company reports, Factset, UBS Equity Research

- **AEP.** We expect a small decline in AEP's EPS in Q2'19 to \$0.97 from \$1.01. We expect a decline of \$0.12 to normal weather. Rate relief likely added \$0.09/share or \$0.06 to Vertically Integrated and \$0.03 to T&D Utilities. O&M and depreciation increases reduced EPS by \$0.05 or more.

Figure 10: AEP Q2'19 Earnings Drivers by Segment

	Q2'19E	Q1'19A	Q2'18A	
Adjusted Earnings	\$0.97	\$1.19	\$1.01	Earnings Drivers
Vertically Integrated	\$0.50	\$0.63	\$0.56	Normal weather -12 cents Rates +6, D&A -3, O&M -1
T&D Utilities	\$0.23	\$0.32	\$0.23	Rates +3 cents, O&M -1, D&A
AEP Trans Holdco	\$0.26	\$0.25	\$0.21	
Gen & Marketing	\$0.04	\$0.09	\$0.05	
Corp & Other	-\$0.06	-\$0.10	-\$0.04	

Source: Company reports, Factset, UBS Equity Research

- **CMS.** We see a decline in CMS' EPS in Q2'19 to \$0.32 from \$0.48. Michigan experienced below normal weather versus an \$0.11/share positive in Q2'18. Carrying costs that we expect the company can pick-up in electric and gas rate case recovery such as depreciation, interest and taxes was potentially a - \$0.05/share impact or more. We also look for a decline at CMS Enterprises from lower sales and revenue. Positives include rate case margins (25% of revenue) which add \$0.06/share and other items. We believe the company can meet EPS guidance due to reinvestment in 2018.

Figure 11: CMS Q2'19 EPS Drivers

	2019E	Q1'19A	Q2'19E	Q3'19E	Q4'19E	Comments
Prior Year Start		\$0.86	\$0.48	\$0.59	\$0.40	
Weather		\$0.08				
Storm Costs		-\$0.10				
O&M reinvestment				\$0.07	\$0.16	Absence of '18 impact
Rates & Investment		\$0.03				
Usage, Enterprises & Other		-\$0.12				
Weather to normal			-\$0.11	-\$0.12	-\$0.01	Absence of '18 impact
Weather			-\$0.03			
Rate case recoverable costs (D&A, interest)			-\$0.05			
Debt, parent dilution			-\$0.01			
Enterprises sales and revenue			-\$0.04	\$0.04	\$0.04	
Gain on asset sales			\$0.03			
Electric Rate Case			\$0.06	\$0.06	\$0.06	
Gas Rate Case					\$0.13	Effective 10/1
Taxes			-\$0.02			
Other			\$0.01	\$0.01	\$0.01	Charitable, other
UBS 2019 Forecas	\$2.48	\$0.75	\$0.32	\$0.65	\$0.79	

Source: Company reports, Factset, UBS Equity Research

- **CU.** We expect investors on the conference call to want to discuss the potential use of proceeds given the company's announced sale of the Alberta Power business and the Alberta Power Line. We anticipate that management will reiterate the focus to potentially target utility or utility like infrastructure or long term contracted assets that would provide not only adequate capital returns but also geographic diversity outside of Alberta. For scale once the asset sales are closed we would expect acquired assets could range in the C\$1 – C\$3Bln range and that the higher end of that range could require preferred equity financing. A larger scale transaction would be possible but management would likely seek a financial partner in such a scenario. For the quarter we expect earnings of C\$0.40 versus C\$0.39 last year. We anticipate that management will report the Alberta Power and Alberta Powerline segments as assets held for sale, but include them in both reported and adjusted earnings. The quarterly results will be most impacted by significantly lower Alberta power prices in the C\$30/MWh range due to mild June and July weather vs. warm weather in 2Q '18. Regulatory decisions in Alberta for the transmission and pipeline segments will be +C\$2mln year on year, and the electric transmission application order will book make up revenue of ~C\$13mln for 2018 and ~C\$4mln for Q1'19 as well as the Q2'19 impacts in the quarter. Other topics of interest for the call will be the IT common matters decision and how that ties to the sale of IT services in as well as the approval of the Hanna transmission project.
- **CUP.** We expect Caribbean utilities to report an in-line quarter at \$0.21. Year over year drivers will be increased usage from economic growth mostly driven by likely increased overnight tourism visits and increased financial sector activity. In 1Q'19 customer growth was 2% year on year with 5% usage growth leading to 4% sales growth overall. Year over year the revised rates for large commercial demand customers that were awarded in June 2018, as well as the 1.8% rate increase under the RCAM mechanism will have an impact. Further we expect slight reductions in financing and operating costs year on year.
- **ED.** We see lower EPS for ED in Q2'19 at \$0.56 versus \$0.61 last year. 3 considerations are: 1) Steam added 3 cents in Q2'18 which unlikely to occur; 2) Stagecoach earnings sharing steps down to 50% from 60% starting 6/6; and 3) An increase in the stock price has a negative impact on the mark to market which was -4 cents as a reference in Q1'19. In Q2'18 CECONY earned a 9.6% ROE although comp mark-to-market could contribute to reducing that to 9.0% which would be a -3 cent reduction. Other drivers include a reduction in the Clean Energy Businesses (\$0.06 versus \$0.09) potentially offset by cost control.

Figure 12: ED Q2'19 EPS Summary

	Q2'19E	Q1'19A	Q2'18A	Earnings Drivers
CECONY	\$0.45	\$1.28	\$0.48	Q2'18 was 9.6% ROE and 48% equity ratio equity dilution, comp -3
O&R	\$0.02	\$0.10	\$0.02	
CEBs	\$0.06	-\$0.04	\$0.09	
CET	\$0.04	\$0.04	\$0.04	StageCoach 50% of Crestwood not 60% start 6/6
Parent	\$0.00	\$0.01	-\$0.02	
Total	\$0.54	\$1.39	\$0.61	Reflects share dilution
Shares MM	327	322	311	

Source: Company reports, Factset, UBS Equity Research

D. We expect D to report adjusted EPS of \$0.76 vs. consensus of \$0.79, and 2Q'18 results of \$0.86. The guidance range for the quarter is \$0.70-\$0.80. Negative yr/yr drivers include a Millstone refueling outage (historical cost range is \$0.07-\$0.09), share dilution (approx. \$0.16), assets sales and more normal weather. Positive yr/yr drivers include the earnings contribution from the Southeast Energy Group (\$0.18 before financing considerations) and rate base earnings growth. Beyond the earnings and regular business report, we expect investors to focus on updates around the Atlantic Coast Pipeline and Supply Header. While an order from the 4th Circuit addressing the biological opinion is expected in early August (90 days after oral arguments), the more important US Supreme Court decision on whether to take up the case won't be issued till late 2019.

- **DTE.** We forecast lower EPS for DTE in Q2'19 at \$1.17 versus \$1.25 last year. We see 3 adjustments in Q2'18 which are: 1) Weather was \$0.17 above normal and this year was unseasonably cold; 2) There will be 1.5 months of the DTE Electric rate increase which we forecast as a 25% margin and 3) Rate base expenses are up to -\$10M after-tax per quarter for DTE Electric and DTE Gas combined. We also see some impact from the absence of NEXUS AFUDC and depressed volumes.

Figure 13: DTE Q2'19 EPS and Net Income Summary (Dollars in Millions)

	Q2'19E	Q1'19A	Q2'18A	Earnings Drivers
DTE Electric	\$150	\$147	\$163	Weather -\$31M to normal and Q2 was cold Rate relief +\$30M; Rate base costs -\$10M
DTE Gas	\$10	\$151	\$14	
GS&P	\$50	\$48	\$60	Volume weighted impact \$47M rate increase rate-base costs -\$3M; tax timing reversal -\$10M
P&I	\$33	\$26	\$43	
Corp & Other	-\$35	-\$3	-\$41	
Energy Trading	\$5	\$5	\$8	Lower volumes; absence of AFUDC but on track
DTE Energy	\$214	\$374	\$247	
EPS	\$1.17	\$2.05	\$1.36	
Shares MM	182	182	181	

Source: Company reports, Factset, UBS Equity Research

- **DUK.** We expect DUK to report adjusted EPS of \$0.98 vs. consensus of \$0.98 and 2Q'18 results of \$0.93. Earnings in the quarter should benefit from better than normal weather, load growth, new rates (SC) and incremental rate base (Citrus County & Rosamont). Midstream will show modest growth (AFUDC) and the commercial renewables segment should show a marked improvement over Q1 as the shape of earnings from that segment adjust. Beyond earnings and guidance, we expect investors to focus on legislative and coal ash updates from North Carolina, the Atlantic Coast Pipeline and the legal appeal of the rate decision in South Carolina.
- **EIX.** We forecast Q2'19 EPS for EIX of \$1.21 versus \$0.85 last year. The big driver is \$0.22 from the general rate case which is the company discussed on the Q1'19 investor call. We also expect for the regulatory lag on non-fuel O&M recovery to dissipate. Other positives include transmission rate base growth and lower financing costs. At Edison Energy and Parent we assume - \$0.05 versus -\$0.06 last year.

Figure 14: Southern California Edison Q2'19 EPS Summary

Q2'18 SCE	\$0.91
Rate case	\$0.22
O&M	\$0.08
Financing	\$0.05
FERC	\$0.03
D&A & other	-\$0.03
Q2'19 SCE	\$1.26

Source: Company reports, Factset, UBS Equity Research

- **EMA.** We expect EMA to report C\$0.52 vs. C\$0.48 last year. Drivers will be the sale of the New England generation assets year over year and mild weather outside the Southeast will be a drag on results in Maine and on the remaining energy segment. In 2Q'18 the power plants has a pre-interest allocation earnings of C\$13.5mln. Interest expense at the plants allocated to corporate was C\$6mln. Maine should show better results year on year given non-recurring storm expenses in 2Q'18. Further Maine received a distribution rate increase of US\$15.7mln in July of 2018. At Nova Scotia Power, weather has been colder than normal which is a driver of demand for electric heat. However, upside is limited from strong weather as a result of a capped ROE sharing mechanism at 9.25%, which is 25bps above the allowed ROE of 9%. As a result, earnings in 2Q will not be as strong as weather might otherwise indicate. In Florida, unlike most of the United States, weather was favorable vs. last year with the warmest May on record and the tail end of June was also warm. The solar under the SOBRA program now has 405MWs earning returns vs. 145MWs booking AFUDC last year. FX average is also approximately 1.33 vs. 1.29 year on year and each +0.01 in FX is about +C\$0.01/share to EMA. On the call we expect investors to be focused on the approval process for the sale of Emera Maine and the management take on the intervenor testimony which will be filed on August 6, vs. the earnings call date of August 12.
- **ETR.** We expect ETR to report adjusted EPS of \$1.40 vs. consensus of \$1.39 and 2Q'18 results of \$1.23. Weather for the quarter should be positive vs. normal, but below last year, while rate increases in Arkansas and Louisiana and rate base growth in Louisiana (St. Charles power station) should all represent yr/yr growth. Our estimate assumes a ratable allocation of targeted O&M savings over the remainder of the year, but we recognize that the actual realization of these savings could be uneven. We expect ETR will update investors on its continued exit from the EWC business, the various proceedings at the regulated entities and any residual impact from the recent hurricane.
- **EVRG.** We forecast Q2'19 Adjusted EPS of \$0.58 versus \$0.90 pro-forma last year. Weather conditions made a significant swing in the quarter from \$0.22/share above normal last year to below normal this year. Deferred taxes was a negative driver as well. Another negative is a reduction in pro-forma merger transaction costs under accounting rules which is a \$35-\$36M pre-tax change (Q2'18 10-Q p. 66). Positive drivers include plant shutdowns at the end of 2018 (Montrose and Sibley), merger synergies and the share buyback.

Figure 15: EVRG Q2'19 EPS Drivers

	Q2'19E	Q1'19A	Q2'18A	Earnings Drivers
Pro-forma, adjusted	\$0.58	\$0.44	\$0.90	
Weather to normal	-\$0.22	\$0.05	\$0.22	
Weather	-\$0.02			Cooling days 14% below normal
Rates	\$0.00	\$0.05		
O&M, absence w-off	\$0.03	\$0.05		
O&M	-\$0.10			Reduction in pro-forma transaction costs
D&A	-\$0.01	-\$0.08		Schedule changes offset in revenue
Tax Rate	-\$0.19	-\$0.01	\$0.19	Change in deferred taxes
Bill Credits	\$0.01			3 months versus 5 months
Severance		\$0.06		
Plant shutdowns	\$0.06			Sibley (400 MW) and Montrose (330 MW)
Merger Synergies	\$0.07			
Share buyback	\$0.04			
Shares Quarter Ended	247	252		
Avg Shares-MM	250	253	272	
GAAP				
EPS	\$0.58	0.39	0.56	
Shares-MM	250	253	181	

Cooling Degree Days	Q2'19	Norm	Q2'18
Missouri	322	354	569
Kansas	323	395	590
Total	645	749	1159
Q2'19 vs.		-14%	-44%

Source: NOAA, Company reports, Factset, UBS Equity Research

- **ES.** We expect ES to report adjusted EPS of \$0.78 vs. consensus of \$0.77 and 2Q'18 results of \$0.76. We look for ES to benefit modestly from the 2018 CL&P rate case implementation, the transmission rate base true up that occurs in the second quarter, ongoing cost control efforts, the investment portfolio mark and the Nstar Electric rate increase. Offsetting these benefits will be the impact of decoupling at Yankee Gas, higher property tax and interest expense, and the loss of generation earnings. We expect the investor call to focus on incremental growth opportunities (GridMod spending in CT/Mass/NH, offshore wind, water M&A), and changes in regulatory personnel.
- **EXC.** We expect EXC to report \$0.59 v. \$0.71 last year. Overall this expectation is below the mid-point of the company's \$0.55-\$0.65 2Q'19 guidance range provided on the 1Q'19 conference call. Factors not incorporated into the guidance range at the time were mild weather impacts at the non-decoupled utilities, especially PECO. Further, the planned outage at the Salem nuclear plant lasted approximately 30 days beyond likely initial projections which would have increased costs by ~\$30mln on pre-tax basis. NDT will also likely be a drag quarter over quarter as of the \$0.07 of NDT gains in 2018, \$0.05 were recorded in 2Q'18. Milder weather is unlikely to impact the nuclear fleet all that much as run times were likely around-the-clock regardless although it could have some small impact on the much smaller non-nuclear generation fleet. Power prices and spreads are lower year on year, however, financial and retail hedging as well as the zero emission credits in New York, New Jersey, and Illinois will protect the majority of the nuclear fleet from significant volatility in EBITDA.
- **FE.** We forecast Q2'19 EPS of \$0.58 versus \$0.62 last year. Weather to normal was -3 cents versus last year and conditions were below normal this year. The absence of a renewable energy credit is a -3 cent item too. Offsetting that is cost cuts and rate base growth. This compares to the company's \$0.55-\$0.65 guidance for the quarter.

Figure 16: FE Q2'19 EPS (Dollars in Millions)

	Q2'19E	Q1'19A	Q2'18A	Earnings Drivers
Adjusted Earnings	\$0.58	\$0.67	\$0.62	
Regulated Distribution	\$0.50	\$0.62	\$0.55	Weather -3 cents to normal and below normal in 2019; renewable credit reversal -3 cents, D&A -1 to -2 cents, FE Tomorrow +1 cents
Regulated Transmission	\$0.21	\$0.19	\$0.19	+2-3 cents of rate base growth
Corporate/Other	-\$0.13	-\$0.13	-\$0.12	

Source: Company reports, Factset, UBS Equity Research

- **FTS.** We expect that consistent with Q1'19 reporting Fortis will report results excluding mark to market impacts from the Aitken Creek storage facility and adjust prior periods to exclude them as well. As a result 2Q '18 will be restated to C\$0.59. For the current quarter we expect lower earnings year on year of C\$0.56 mainly driven by significantly milder weather in Arizona. Further 2Q'18 included nonrecurring items related to the positive hydrology impacts in Belize and the Hurricane Irma insurance receipts. Offsetting this will be rate base and sales growth as well as positive timing impacts related to the timing of plant outages in Arizona. Lastly, the sale of the Waneta hydroelectric plant will have a greater than anticipated drag on the quarterly results as the majority of earnings contribution was seasonally in the second quarter. We expect that on the call investors will be focused on execution of any potential incremental capital projects that could increase or extend current growth rates, and any updates on the Federal Energy Regulatory Commission transmission ROE review process and the ongoing rate case for Tucson Electric Power in Arizona.
- **HE.** We expect HE to report adjusted EPS of \$0.44 vs. consensus of \$0.45 and 2Q'18 results of \$0.42. Yr/Yr earnings will benefit from interim rates at Maui Electric (\$12.2mm; effective Aug '18) and the interim recovery mechanism (MPIR) for the Schofield project. We expect Bank earnings to benefit from asset sales and lease expirations at some point this year (3-5 cents) but believe these will be one time benefits. We expect the earnings conference call to focus on the regulatory climate and proceedings in Hawaii, and capital spending opportunities.
- **H.** We expect H to report C\$0.26 v. C\$0.32 last year, mainly driven by milder weather year on year. Peak loads in Ontario in May were down 20% year on year and overall peak loads were down 9% quarter over quarter. Further, there were significant storm costs in Ontario in 2Q'18 which are helpful to earnings as they are capitalized, so lack of storm costs will likely increase O&M year on year given a return to normal work patterns. Further, lack of storms has likely allowed for an acceleration of work related to maintenance and vegetation management which would also increase O&M year on year. Further, interest expense will tick a bit higher given the term out of C\$1.5Bln in debt issued in April 2019, composed of C\$700mln at 2.54% due 2024, C\$550mln at 3.02% due 2029, and C\$250mln at 3.64% due 2050. On the call we expect investor focus to be on any improvement in controllable costs, the recently announced changes to the Board of Directors, and any insights into the status of the change out of several senior management positions, and how new CEO Mark Poweska's strategy for the company continues to evolve.

- **NEE.** We expect NEE to report \$2.31 v. \$2.28 last year. Year over year we anticipate drivers at FPL to be new investment growth (+\$0.07). The acquisition of Gulf Power will also be additive year on year (+\$0.10). At NEER, results will be driven by growth for existing assets (+\$0.08) and increased earnings due to new investments related to execution of the backlog (+\$0.05). Offsetting these positive drivers will be share dilution (-\$0.05), and lower results at Corp & Other (-\$0.12). We expect not much of an update informationally on the conference call versus the recently held Analyst Day in New York. Investors will be focused on any updates on wind backlog at NEER, and any insights into the further integration efforts for recently acquired Gulf Power.
- **OGE.** We forecast a decline in Q2'19 EPS at OGE to \$0.52 from \$0.55 last year. The absence of above normal weather is -5 cents and we estimate the impact of below normal conditions (particularly June) in Oklahoma was -2 cents. That said July has started off well and OGE is on track for the year.

Figure 17: OGE Q2'19 EPS Summary

OGE EPS Summary			
	Q2'19E	Q1'19A	Q2'18A
OGE	\$0.52	\$0.24	\$0.55
OG&E	\$0.41	\$0.14	\$0.46
OGE Energy Holdings	\$0.12	\$0.12	\$0.11
Hold Co.	-\$0.01	-\$0.01	-\$0.02

OG&E Earnings Drivers	
Q2'18	\$0.46
Weather to normal	-\$0.05
Below normal	-\$0.02
Rate design	\$0.01
AFUDCD&A	-\$0.01
Interest expense	\$0.01
O&M	\$0.01
Q2'19	\$0.41

Source: Company reports, Factset, UBS Equity Research

- **PCG.** PCG will report Q2'19 EPS results on July 26 and we see \$1.16 versus \$1.16 last year. Tax timing is a regular driver for the company that nets to zero for the year. The company began to record formula rates for the 2020 transmission rate case on May 1. PG&E requested a 12.5% ROE. There was not a nuclear outage in the quarter.

Figure 18: PCG Q2'19 EPS Summary

PCG Q2'18	\$1.16
Tax timing	-\$0.05
Non-fuel O&M	-\$0.02
Shares	-\$0.01
Rate base	\$0.04
Reduction in insurance	\$0.04
PCG Q2'19	\$1.16

Source: Company reports, Factset, UBS Equity Research

- **PNM.** We expect PNM to report adjusted EPS of \$0.37 vs consensus of \$0.49 and 2Q'18 results of \$0.53. Our estimate is consistent with guidance issued by the company of \$0.36-\$0.38 on 7/12 which reflects substantially milder temperatures in the service territory during the second quarter. We expect investor attention will focus on the company's earning profile through the remainder of the year, weather trends that have been observed quarter to date and the contributing factors to the revised annual guidance.
- **PNW.** We expect PNW to report Q2'19 EPS of \$1.37 versus \$1.48 last year. There are some significantly negative drivers including a decline in cooling degree days 28% from 2018 and 30% versus normal (about 130 days). In Q1 PNW had 1.0% weather normalized sales growth which could continue. Other drivers include several timing related items versus last year like pension and transmission income. PNW also provides guidance on quarterly outage spending.

Figure 19: PNW Q2'19 EPS Summary

Q2'18	\$1.48
O&M	\$0.10
Sales	\$0.02
LFCR	\$0.01
Interest	\$0.01
Depreciation	-\$0.02
Outage O&M	-\$0.03
Transmission	-\$0.04
Pension	-\$0.05
Weather	-\$0.11
Q2'19	\$1.37

Source: Company reports, Factset, UBS Equity Research

- **POR.** We forecast flat EPS in Q2'19 of \$0.52 versus \$0.51 last year. The absence of plant O&M should add 4-5 cents and normal weather conditions adds 2 cents. We don't see much of a story here for the quarter.

Figure 20: POR Q2'19 EPS Summary

Q2'18	\$0.51
Weather	\$0.02
Carty	\$0.03
Plant O&M maintenance	-\$0.04
Rate case	\$0.03
Q2'19	\$0.52

Source: Company reports, Factset, UBS Equity Research

- **PPL.** We expect flat EPS for PPL in Q2'19 at \$0.55 versus \$0.55 last year. At a high level we see +3 cents from F/X hedges (1.41x UK sterling to US dollar) for the company's U.K. utility and Kentucky rate relief offset by non-fuel O&M and weather.

Figure 21: PPL Q2'19 EPS Summary

	Q2'19E	Q1'19A	Q2'18A	Earnings Drivers
EPS	\$0.55	\$0.70	\$0.55	
Pennsylvania	\$0.11	\$0.16	\$0.11	Weather -1 cent, Transmission +1
Kentucky	\$0.12	\$0.17	\$0.12	Rates +2 cents, weather -1
U.K.	\$0.37	\$0.42	\$0.36	F/X +3 cents, O&M -2 cents
Other	-\$0.03	-\$0.05	-\$0.04	
Shares MM	728	723	698	

Source: Company reports, Factset, UBS Equity Research

- PEG.** We expect PEG to report \$0.58 v. \$0.65 last year. One of the key drivers will be timing related to tax reform impacts for excess deferred income taxes. This factor was +\$0.05 in 1Q'19 and we expect that to reverse out in 2Q'19. On the PEG Power side both the Keys Energy Center and Sewaren 7 were put into service in late 2Q '18 and will add 1,300MWs of capacity to the generation fleet for the majority of the quarter year over year. Zero Emission Credits were also put into place in New Jersey in April 2018 and will be a positive driver of results as they will have a full quarter of impact in 2Q'19. However this positive impact is likely to be mostly offset by lower capacity prices year over year as prices reset on the June 1 capacity year. Last year capacity prices were \$205/MW-day on 9,600MWs of capacity while this year pricing as of June 1 was \$115/MW-day on 9,000MWs of capacity. Capacity prices in New England were also lower (\$2.31/kW-month vs. \$3.14/kW-month) despite capacity being +500MWs for the new capacity year. Re-contracting will also be a headwind to results as PEG management indicated a \$3/MWh drag although because of seasonal impacts we expect a lower drag on results in 2Q than the (\$0.08) seen in 1Q'19. Off-system sales for gas will be lower year over year due to milder weather, and results will be impacted by outage timing as the planned outage at the Salem nuclear facility extended by a likely 30 days beyond projected timelines. However, the Salem plant is only 50% owned by PEG whereas Hope Creek had an outage in 2Q'18 and that plant is 100% owned by PEG. D&A and interest expense are projected to tick higher due to the new plant in service. At the utility we expect the transmission formula rate to be +\$0.03 year on year, and despite the distribution rate increase settled on Nov 1 expect that to not have large impacts in 2Q given seasonality of load. Changes to OPEB will add roughly +\$0.01 as in 1Q'19 and there will be some incremental benefit from the operating contract at LIPA booked in parent & other. Interest expense will be up slightly at parent and other for the \$750mln at 2.875% in debt issued on June 1 slightly offset by the retirement of \$350mln at LIBOR +80bps earlier in the quarter.
- SRE.** We expect SRE to report \$1.17 v. \$1.21 last year mainly driven by continued drag related to the GRC decision in California. A final decision would be retroactive to 1/1/19 but cannot be booked until received. Our latest expectation for GRC resolution in year-end 2019. We expect interest expense to be slightly higher given issuances of \$400mln at SDE&G and \$390mln at SoCalGas at around 4%. Offsetting the drag somewhat are likely to be increased earnings for the pipeline program and energy efficiency awards. At Oncor results should be higher year on year related to the close of the InfraREIT transaction on 5/16, although volumes are likely to be lower on milder weather in ERCOT. At South America there were no one-time items in 2Q'18 although there will likely be an FX drag year on year. In Mexico the Peso averaged 19.9 to the USD at 2Q'19 vs. 18.3 at Q2'18 versus hedged levels of 20.72. The TDN plant is uncontracted into the SoCal market and SP15 pricing is down year over year. Renewables will have negligible to no impact in the quarter as the transaction with AEP is now closed. LNG and midstream will continue to be a little bit of a drag on results as expected until the completion of the Cameron LNG facility. We expect corporate and other to be roughly in-line with 1Q'19. There will likely be slightly higher interest expense related to \$700mln in debt issuance at 7.5% year over year and the proceeds from the storage and wind sale of \$500mln paid off short term debt at a 2.5% - 3% rate.

- **SO.** Southern reported \$0.80 in 2Q'18 and issued guidance for 2Q'19 on their first quarter call of \$0.71 versus our estimate of \$0.72. The main drivers year over year will be the divestitures of the Florida assets to NextEra Energy. In 1Q'19 this was a (\$0.11) year over year impact, and we anticipate about a (\$0.09) impact in 2Q'19. Another significant driver will be weather as April was significantly milder than normal, May was a touch warmer than normal, and June was cooler than normal all vs. warmer than normal weather last year. Management may be able to shift O&M timing to mitigate some of the negative impact of cooler weather. PowerSecure in Puerto Rico was a (\$0.03) drag in Q1 '19 and we would expect a slightly smaller drag in 2Q'19. Higher share count will also be a year on year negative driver. We expect lower interest expense year on year given the debt retired with the proceeds of the Florida assets sales, and expect sales and rate base growth to also be positive drivers in the quarter. On the call we expect investors will be focused on the ongoing Vogtle new nuclear project (the Georgia PSC staff comments on the project rebasing are due the same day as the earnings call), as well as other regulatory matters in Georgia. While the integrated resource plan will be settled by the time of the call, most of the financial implications of the IRP will be determined within the context of the Georgia Power general rate case which was filed at the beginning of the month. Hearings for the GRC begin on September 30th and we expect the biggest discussion points to be around return on equity and coal ash mitigation spending and recovery. We see the Atlanta Gas Light rate case as less potentially contentious and view the Mississippi Power rate case to be filed in November potentially positive given two of the three commissioners in that state have decided to not stand for reelection.
- **WEC.** We expect WEC to report toward the low end of their 2Q'19 guidance range of \$0.70-\$0.72 at \$0.70 vs. \$0.73 last year and consensus estimates of \$0.72. Weather will be a driver as both heating degree days and cooling degree days are down year over year, and 2Q'18 results included a +\$0.04 impact for above normal weather. Upstream Wind and Bishop Hill have come online year over year and Presque Isle's retirement will save about \$40mln in O&M on an annualized basis although that will be weighted away from the 2Q shoulder period. The RICE units came on-line at the end of March and will be \$8-\$10mln additive to O&M year over year. Management guided to a 3%-4% reduction in O&M in 2019 vs. 2018 but that could be lumpy throughout the year vs. a normalized +\$0.02 per quarter. ATC also had a non-recurring charge in 2Q'18 of \$3.7mln on a FERC Audit which will be +\$0.01 year on year. There were several debt issuances year on year, and at the Hold Co. there was \$350mln issued at 3.1% due 2022 while late in '18 \$250mln was retired at 1.65%, which will be a slight increase in interest expense year over year.
- **XEL.** We expect XEL to report adjusted EPS of \$0.52 vs. consensus of \$0.54 and 2Q'18 results of \$0.52. Yr/yr earnings should benefit from higher rates in Minnesota/Colorado/New Mexico, and improved O&M management vs. Q1'19. These benefits will be offset by weather which we estimate was either close to, or below normal during the quarter (vs. a \$0.04 benefit in Q2'18).

Water Utilities

Following a traditionally slow start to the year, water use and capital investment tends to pick up for the group in the second and third quarter. We expect earnings growth at AWR as a result of new rates and higher Contracted Services. AWK will

continue to benefit from the Pivotal acquisition, and rate increases. Both WTR and SJW results will be negatively impacted by share dilution, while CWT and CTWS will report largely in line with consensus.

- **AWR.** We expect AWR to report adjusted EPS of \$0.58 vs consensus of \$0.55 and 2Q'18 results of \$0.44. Growth in the quarter is driven by modest growth at the Water utility (new rates), and higher earnings at Contracted Services.
- **AWK.** We expect AWK to report adjusted EPS of \$0.89 vs consensus of \$0.93 and 2Q'18 results of \$0.83. Rate increases are expected to provide growth in the quarter, offset by slightly higher expenses. The Pivotal acquisition, which closed after 1Q'18 should contribute to be a positive year-over-year variance.
- **WTR.** We expect WTR to report adjusted EPS of \$0.32 vs consensus of \$0.38 and 2Q'18 results of \$0.37. Quarter over quarter earnings growth is driven by rate increases and normal customer growth, which will be more than offset by share dilution. We expect a gain in the quarter associated with the closing of an interest rate hedge (\$11mm gain) to be adjusted out of given its one time nature. An ALJ recommendation in the company's pending acquisition is expected by the end of August, with a final PSC decision in late October.
- **CWT.** We expect CWT to report adjusted EPS of \$0.41 vs consensus of \$0.37 and 2Q'18 results of \$0.37. Quarterly earnings benefit from higher rates in CA, WA and HI, that will be somewhat offset by higher expenses. This year is the third year of CWT's rate case cycle in CA, which usually generates the largest gap in cost recovery.
- **CTWS.** We expect CTWS to report adjusted EPS of \$0.68 vs consensus of \$0.68 and 2Q'18 results of \$0.59. Earnings in the quarter will benefit from rate increases in Connecticut and Maine. Our estimates exclude the impact of merger related costs.
- **SJW.** We expect SJW to report adjusted EPS of \$0.63 vs consensus of \$0.56 and 2Q'18 results of \$0.72. Earnings in the quarter benefit from higher rates in California, however, this benefit is more than offset by higher expenses and share dilution.

Independent Power Producers

- **NRG.** We expect NRG to report adjusted EBITDA of \$486mln vs. \$843mln last year and the main driver of the results to be the asset sales of renewables, NYLD, and the South Central assets year over year. We do believe consensus is too high as estimates continue to not be seasonally weighted enough to the third quarter which is not fully reflected of NRG's more ERCOT heavy business mix post asset dispositions. Further, booking generation to retail transfer pricing on an expected average basis over the course of the year, naturally weights earnings to the third quarter. While actual power prices were significantly lower year over year, we expect NRG's matched generation and retail book to have significantly reduced volatility of EBITDA in the quarter. Forward curves are also lower by \$2-\$4/MWh which lowers the mark to market of EBITDA forecasts in future years. However, key to the conference call will be discussion of the expansion of retail margins as generation margins decline and the true sensitivity of future year's EBITDA to changes in the forward curves. Disclosed hedging levels for NRG at 1Q'19 were 93%/82% in ERCOT/PJM for

the balance of 2019 and 56%/35% in ERCOT/PJM for 2020. Also on the call management could begin to further discuss the "retail-lite" strategy around contracting assets under purchased power agreements which would further lower volatility of EBITDA and cash flows.

- **VST.** We expect VST to report adjusted EBITDA of \$718mln vs. \$653mln last year. We believe consensus is too low as the Dynegy acquisition has led to a diversity of the portfolio outside of ERCOT, and therefore less seasonality of results toward the third quarter. Further, given the higher generation prices at which management hedged the third quarter earlier in the year, and the booking of actual transfer price experience between retail and generation throughout the year, we expect this year to have greater retail margins in Q1, Q2, and Q4 and thinner retail margins in Q3. This was discussed in detail by management on the 1Q'19 conference call. While VST is more exposed than NRG to the reduction in power prices on the forward curve given their 50% retail to generation match, we also expect management to address the lower volatility of EBITDA and cash flows to forward curve changes than in the past given in place hedging and offsetting expansion of retail margins. Hedging disclosures on the 1Q'19 call showed for ERCOT 100%/100% for natural gas; 94%/52% for heat rates for '19/20 respectively. Outside of ERCOT hedge levels were 74%/94%/95% and 37%/32%/67% on volumes in '19/20 for MISO/CAISO, NENY, and PJM respectively. On the call investors will also likely focus on the recent close of the Crius acquisition and what incremental factors management has learned since owning the business.

Figure 22: Power Price Comparisons (\$/MWhr)

ISO	Hub	2Q '19	2Q '18	Change
ISO NE	Internal Hub	24.02	31.02	(6.99)
NYISO	Zone G	20.98	28.52	(7.54)
PJM	AEP-Dayton	24.38	34.94	(10.57)
PJM	Eastern	22.48	29.92	(7.44)
PJM	N Illinois	22.19	26.08	(3.89)
PJM	PSEG	21.54	27.95	(6.41)
PJM	Western	24.07	33.76	(9.69)
MISO	Indiana	25.23	33.16	(7.93)
MISO	Michigan	25.67	32.20	(6.52)
ERCOT	North	25.09	27.76	(2.67)
ERCOT	Houston	26.28	28.08	(1.79)
ERCOT	West	23.34	22.60	0.73
CAISO	NP15	21.18	24.56	(3.37)
CAISO	SP15	21.64	24.87	(3.23)

Source: S&P Global Market Intelligence, UBS Equity Research

Figure 23: Spark Spread Rate Trends (\$/MWh)

Period	ISO	Hub	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Q219	ISO NE	Internal Hub	\$ 10.92	\$ 12.49	\$ 11.90	\$ 8.72	\$ 5.71	\$ 6.54	\$ 6.20
Q218	ISO NE	Internal Hub	\$ 11.70	\$ 11.51	\$ 12.28	\$ 10.45	\$ 10.67	\$ 8.00	\$ 8.53
		Change	\$ (0.78)	\$ 0.97	\$ (0.38)	\$ (1.73)	\$ (4.96)	\$ (1.47)	\$ (2.33)
Q219	PJM	Eastern	\$ 13.60	\$ 12.36	\$ 11.82	\$ 11.69	\$ 11.24	\$ 11.12	\$ 11.54
Q218	PJM	Eastern	\$ 16.40	\$ 14.33	\$ 15.30	\$ 15.28	\$ 15.04	\$ 14.21	\$ 13.97
		Change	\$ (2.80)	\$ (1.97)	\$ (3.48)	\$ (3.59)	\$ (3.80)	\$ (3.09)	\$ (2.42)
Q219	PJM	Western	\$ 14.47	\$ 15.50	\$ 14.61	\$ 14.53	\$ 14.28	\$ 13.66	\$ 14.08
Q218	PJM	Western	\$ 16.73	\$ 18.05	\$ 18.63	\$ 18.35	\$ 17.96	\$ 17.42	\$ 17.17
		Change	\$ (2.25)	\$ (2.55)	\$ (4.03)	\$ (3.81)	\$ (3.68)	\$ (3.77)	\$ (3.09)
Q219	ERCOT	Houston	\$ 22.74	\$ 22.67	\$ 20.44	\$ 17.41	\$ 15.01	\$ 12.05	\$ 9.39
Q218	ERCOT	Houston	\$ 30.04	\$ 23.69	\$ 22.11	\$ 19.84	\$ 16.66	\$ 14.49	\$ 10.59
		Change	\$ (7.30)	\$ (1.02)	\$ (1.67)	\$ (2.43)	\$ (1.65)	\$ (2.44)	\$ (1.21)

Source: S&P Global Market Intelligence, UBS Equity Research

Alternative Energy 2Q19 preview

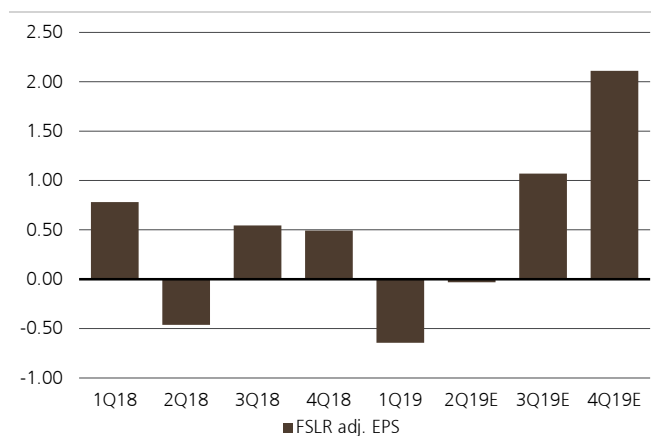
Key issues for the quarter

For Buy rated FSLR and TPIC we expect relatively weak 2Q19 results ahead of an inflection in y/y and sequential earnings growth in 3Q19.

FSLR is nearing the end of its manufacturing transition to Series 6, which is expected to drive increased production capacity and margin expansion. Despite ~breakeven EPS for FSLR being flagged on the 1Q earnings call we expect volatility in the stock on results.

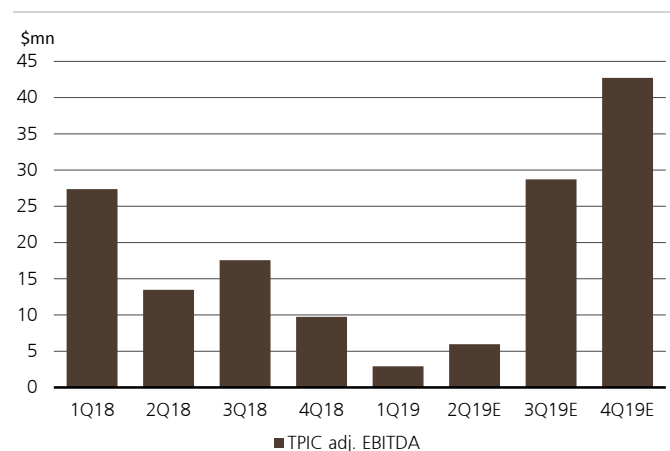
For TPIC, the company was impacted by one-off labor and production issues in 1H19 which offset the positive tailwind from manufacturing line transitions and startups. We model a significant earnings ramp starting in 2H19 through 2020, but expect 2Q19 adj. EBITDA of just \$6mn, down 56% y/y. We expect a key focus to be on maintained 2020 financial targets.

Figure 24: FSLR 2018-2019 quarterly adj. EPS



Source: Company reports, UBS estimates

Figure 25: TPIC 2018-2019 quarterly adj. EBITDA



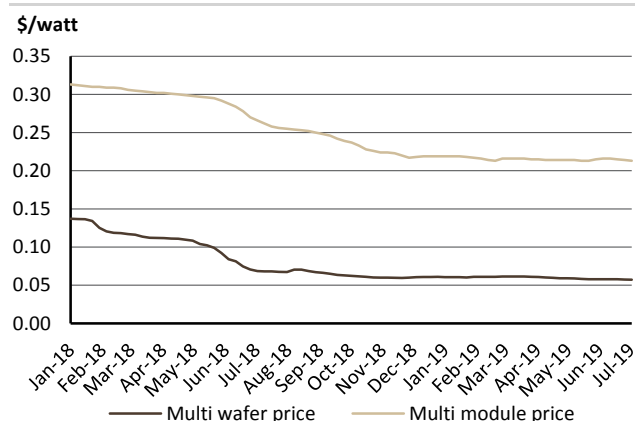
Source: Company reports, UBS estimates

For the module manufacturers we expect stronger than previously expected China solar demand in 2019 to support potential upward guidance revisions for 2019

module shipments, particularly for the Chinese exposed names CSIQ and JKS. Please see China Utilities Analyst Alex Liu's recent note: [NEA: 50GW solar projects to start construction in 2019](#).

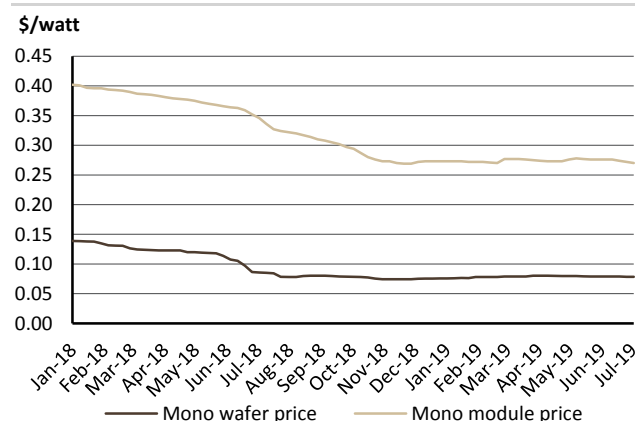
Commodity multi silicon module pricing declined just 1% q/q in 2Q19 while multi silicon wafer pricing declined 3.7% over the same period. Pricing for mono silicon modules increased 0.4% q/q, while mono wafer pricing increased 1.9% q/q suggesting continued strong demand for high efficiency solar products. We expect the increased input costs for mono wafer to result in potential 2Q19 margin pressure for JKS which has a relatively larger proportion of capacity dedicated to mono. Please see: [Downgrade to Neutral](#).

Figure 26: Multi silicon wafer and module ASP, \$/watt



Source: PV Insights, UBS research

Figure 27: Mono silicon wafer and module ASP, \$/watt



Source: PV Insights, UBS research

Company specific focus areas

- **FSLR:** We expect a 2Q19 loss of \$3mn (\$0.03/sh) driven by Series 6 ramp and start up charges, while approximately 75% of Series 6 2019 sales will occur in 2H. Consensus 2Q19 adj. EPS is currently \$0.00/sh. We currently forecast 2H19 adj. EPS of \$3.18/sh compared to 1H19 adj. EPS of (\$0.67)/sh. 4Q19 Series 6 cost per watt is expected to be 30% lower than 1Q19 cost. We also look for an update on FSLR's progress restructuring its EPC organization to ease labor constraints and equipment supply issues. As of the 1Q19 earnings call FSLR had sold 50% of 1Q21 capacity with new bookings in the mid-\$0.30/watt range. We expect strength in bookings demand for 2021 deliveries could increase the likelihood of FSLR converting its 3rd Malaysia manufacturing facility to Series 6, a development we would view positively.
- **SPWR:** We expect a slowdown in 2Q19 residential solar installations in the CA market driven by abnormally wet weather. SPWR's residential business is relatively more weighted to the CA market compared to other national installers as a result of its leading share in the CA new homes market. SPWR had previously guided to 60-70MW of residential deployments for 2Q19 and 280-310MW deployments for the full year. We expect a key focus will be on any development in potential sources of funding for both NGT manufacturing capacity expansion and safe harboring of modules to capture the full 30% investment tax credit in 2020 and beyond as SPWR had expected to begin executing on financings in 2H19.

- **CSIQ:** 2Q19 guidance is for 1.95-2.05GW module shipments, \$970-1,010mn revenue, and 13-18% gross margin (16-18% excluding impact of low margin Mustang solar project sale). We see potential upward bias to 2019 guidance which is currently 7.4-7.8GW module shipments, and revenue \$3.5-3.8bn due to China National Energy Administration's announcement that it expects 50GW of solar to begin construction in 2019. See: [NEA: 50GW solar projects to start construction in 2019](#). We also look for an update on the status of CSIQ CEO Dr. Shawn Qu's medical leave of absence. Yan Zhuang, SVP, COO, and President of the MSS segment has stepped in as acting CEO.
- **JKS:** JKS has secured 70% of orders for 2H19 providing relatively good demand visibility for the rest of the year. JKS is well positioned to benefit from stronger solar demand from China in 2H19 driven by finalization of 2019 solar subsidy policy. However, we expect gross margin to be lower than the 16.6% 1Q19 margin due to ongoing manufacturing capacity expansion and a higher contribution from lower-margin sales in the China market. We expect 2019 capex of \$450mn for mono wafer and PERC cell capacity expansion. 2Q19 guidance is for shipments of 3.2-3.3GW and gross margin between 14-15%, with a high level of confidence given JKS reported 1Q19 earnings on 28 June.
- **RUN:** We expect abnormally wet weather in CA to contribute to a sluggish 2Q for residential solar installations, however RUN is less exposed to the CA market than peer SPWR. RUN previously provided 2Q19 deployment guidance of 102-104MW and FY2019 deployment growth guidance of 16-18%. RUN highlighted 100% y/y growth in the Brightbox storage business in 2019. The ramp in storage is likely to continue to drive higher customer acquisition cost given the higher entry price for solar with attached storage. For more on RUN's battery storage strategy in our note: [Value stacking residential storage](#).
- **SEDG:** Focus will be on the status of SEDG's manufacturing ramp in a new Vietnam facility which is expected to provide tariff-free inverter supply to the North America market. 2Q19 guidance was previously provided for revenue \$310-320mn, gross margin of 32-34%, and solar product gross margin of 33-35%. We expect revenue from the acquired SMRE, Kokam, and Gamatronic businesses will see gradual sequential q/q revenue growth in 2019 from supply chain and channel sales improvements, and guidance implies 2Q19 non-solar revenue of \$20mn. By YE19 we expect acquired revenues to comprise less than 10% of sales.
- **HASI:** Long term core EPS growth guidance of 2-6% off a 2017 baseline remains intact implying core EPS of \$1.37 in 2019 at the midpoint. We model 2Q19 core EPS of \$0.34.
- **ORA:** We forecast 2Q19 adj. EPS of \$0.36 and adj. EBITDA of \$90mn reflecting typical seasonality of electricity generation. 2Q results are also expected to include \$4mn of business interruption insurance proceeds related to the Puna plant. Current 2019 guidance is for revenue of \$720-742mn and adj. EBITDA of \$370-380mn.
- **TPIC:** Slower than expected replacement hiring and training time in Mexico has led to production delays and triggered significant liquidated damages which are expected to continue through 3Q19 (included in the \$25mn Mexico related reduction). We model a significant earnings ramp starting in 2H19 through 2020, but expect 2Q19 adj. EBITDA of just \$6mn, down 56% y/y. We expect a key focus to be on maintained 2020 financial targets.

Figure 28: Alternative Energy key estimates

Company	Ticker	Scheduled Reporting Date	Quarterly			Annual		
			2Q19E	2Q19E	UBS	2019E	2019E	UBS
			UBS	Consensus	Vs. Consensus	UBS	Consensus	Vs. Consensus
ALTERNATIVE ENERGY								
Sunpower	SPWR	July 30 est.	(\$0.16)	(\$0.16)	\$0.00	(\$0.30)	(\$0.42)	\$0.12
Hannon Armstrong	HASI	Aug 2 est.	\$0.34	\$0.34	\$0.00	\$1.39	\$1.39	(\$0.00)
SolarEdge	SEDG	Aug 2 est.	\$0.77	\$0.83	(\$0.06)	\$3.09	\$3.18	(\$0.09)
First Solar	FSLR	Aug 6 est.	(\$0.03)	(\$0.00)	(\$0.03)	\$2.51	\$2.44	\$0.06
TPI Composites	TPIC	Aug 7	(\$0.23)	(\$0.19)	(\$0.04)	\$0.06	\$0.02	\$0.04
Ormat Technologies	ORA	Aug 7 est.	\$0.36	\$0.33	\$0.03	\$1.62	\$1.68	(\$0.07)
SunRun	RUN	Aug 7 est.	\$0.43	\$0.25	\$0.18	\$1.09	\$0.60	\$0.49
Canadian Solar	CSIQ	Aug 14 est.	\$0.66	\$0.35	\$0.31	\$2.20	\$2.41	(\$0.21)
Jinko Solar Holding Company	JKS	Aug 22 est.	\$0.37	\$0.28	\$0.09	\$1.93	\$2.79	(\$0.86)

Source: Company reports, Factset, UBS research estimates.

Environmental Services 2Q19 preview

Key issues for the quarter

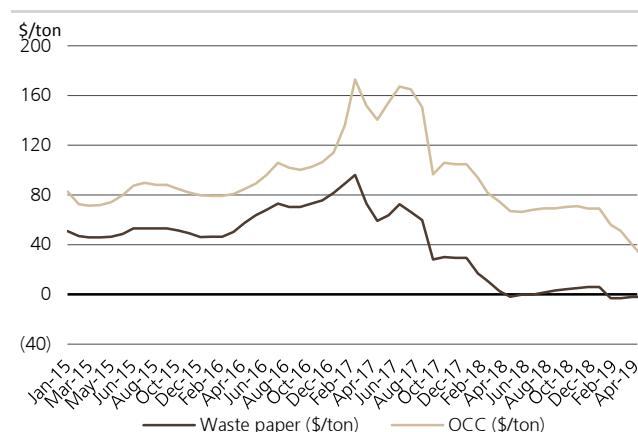
We expect the majority of investor questions to be focused on the impact of two headwinds to MSW earnings growth: 1) a 64% YTD decline in recycled fiber pricing and 2) a 10% YTD decline in Permian Basin E&P rig count. 2019 guidance, which is typically set in February, largely reflects a "steady state" outlook and we anticipate management commentary to focus on the incremental headwinds from continued commodity price and drilling activity declines. Broadly we see continued above average acquisition activity in 2019 helping to offset these headwinds.

WCN has already flagged a potential \$3-5mn EBITDA headwind per quarter due to the decline in E&P activity and \$5mn EBITDA headwind per quarter due to commodity price weakness. WCN has the largest E&P exposure of the MSW group at 5% of revenue followed by WM at ~3%.

MSW 2019 guidance is typically updated with 2Q19 results, however given these headwinds we see a bias towards reaffirming existing guidance rather than the historically common beat-and-raise.

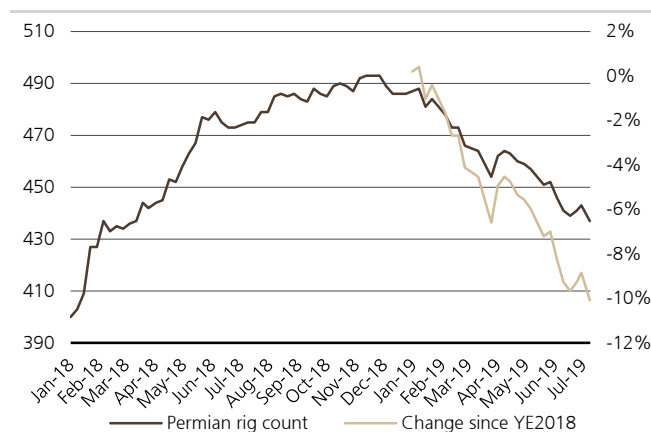
We remind investors that MSW was able to overcome a 2018 ~50% y/y decline in recycling prices due to strong underlying macro conditions supporting the ~95% of revenue from the core disposal business. See: [UBS Evidence Lab Inside: Housing survey read-throughs for waste volumes, March 2019](#).

Figure 29: Recycled commodity pricing, \$/ton



Source: RISI, UBS Research

Figure 30: U.S. Permian E&P rig count



Source: Baker Hughes, UBS Research

Figure 31: Environmental Services business mix

Metric 2019E	WM	RSG	WCN	ADSW	CWST	CVA
2019 revenue (\$bn)	15.5	10.5	5.4	1.6	0.7	1.9
N. American market share	26%	17%	9%	3%	1%	3%
Geographic						
U.S. Northeast	22%	18%	22%	26%	100%	47%
U.S. South	24%	34%	17%	36%	0%	33%
U.S. Midwest	23%	20%	12%	38%	0%	7%
U.S. West	24%	28%	33%	0%	0%	10%
Canada/other	7%	0%	16%	0%	0%	3%
Total	100%	100%	100%	100%	100%	100%
Revenue composition						
Residential collection	16%	19%		25%	17%	0%
Commercial collection	22%	25%		23%	18%	0%
Industrial collection	15%	18%		15%	17%	0%
Total collection	53%	62%	60%	63%	52%	0%
Other operations						
Transfer	9%	11%	10%	10%	9%	10%
Disposal	19%	20%	20%	21%	18%	58%
Recycling	8%	3%	2%	1%	7%	5%
E&P	3%	2%	5%	1%	2%	0%
Other operations	8%	2%	3%	4%	12%	27%
Total	100%	100%	100%	100%	100%	100%
Cost composition						
SGA as % of revenue	9.8%	10.4%	11.0%	11.6%	12.8%	6.2%
Opex as % of revenue	62%	61%	58%	64%	68%	75%

Source: Company reports, UBS research estimates

Company specific focus areas

- **RSG:** As of the 1Q19 call RSG flagged a \$0.07 EPS headwind from recycled commodity pricing assuming current pricing holds. Pricing has since fallen by an additional \$15/ton implying potential \$0.12/sh total EPS headwind. RSG had previously reiterated 2019 EPS guide of \$3.23-3.28 and FCF of \$1.125-1.725bn. However the previously increased 2019 M&A spend target of \$300mn should help mitigate commodity pricing pressures. RSG's \$142mn current YTD spend is expected to contribute \$55mn in annualized revenue.
- **WCN:** We revise our 2Q19 adj. EBITDA to \$426mn from \$436mn previously and our FY2019 adj. EBITDA to \$1,708mn from \$1,713mn previously. On 4 June WCN flagged 2 potential headwinds to 2Q19 results; first, a \$5mn EBITDA headwind from 30% decline in recycled commodity values, second, a \$3-5mn EBITDA headwind driven by 10% YTD reduction in E&P rig count. 2Q19 guidance was previously provided for revenue of \$1,360mn and adj. EBITDA of \$434mn. These headwinds are expected to be offset by contribution from acquisitions in 2H19 with WCN still achieving current 2019 adj. EBITDA guidance of \$1,705mn. We expect WCN to potentially provide an updated 2019 outlook on the 2Q19 earnings call.
- **CWST:** Since the 1Q19 earnings call CWST has acquired \$11.5mn annualized revenue (\$18.5mn YTD) and announced an asset purchase agreement to buy RSG waste assets in NY and MA. The asset purchase will add \$30mn of annualized revenue and is expected to close by the end of 3Q19. Based on these acquisitions we estimate CWST tracking well ahead of its FY2019 guidance for \$152-156mn adj. EBITDA. We forecast 2Q19 adj. EBITDA of \$43.3mn (consensus \$41.6mn) which should be relatively unaffected by recent commodity price declines given offsetting fees recouped through CWST's SRA program. Recycling adj. EBITDA was up \$2mn y/y in 1Q19 driven by these fees.
- **CVA:** We update our 2Q19 adj. EBITDA estimate to \$98mn from \$112mn previously to reflect a revision to our expected plant maintenance expense in the quarter. The increase in maintenance expense compared to our prior estimate is to account for the impact of the Palm Beach plant which CVA acquired in 4Q18. Maintenance spend is historically heavier in 1H for CVA. Our EPS estimates are revised in-line with the EBITDA change.
- **CLH:** We forecast 2Q19 adj. EBITDA of \$151mn or +8.2% y/y, a slowdown from the 15.2% y/y 1Q19 growth due to more difficult y/y comps. We expect earnings to benefit from a business interruption insurance recovery related to CLH's Deer Park facility outage (\$3.5mn EBITDA headwind in 1Q19). CLH has been working to reposition some oil inventory to the southern part of U.S. to try to mitigate future shortfalls/transport limitations driven by weather. Closed loop oil sales are tracking to the 15mn gallon target in 2019. Management noted at the UBS Industrials Conference in June that the Environmental Services pipeline was the strongest it has ever been and expect this to drive solid growth through 2020. See: [UBS Global Industrials Conference takeaways](#).
- **ECOL:** We forecast 2Q19 adj. EBITDA of \$35mn or +10% y/y driven by contribution from 2018 acquisition activity. ECOL's planned merger with NRCG received FTC antitrust clearance on 16 July and is still subject to approval from both ECOL and NRCG shareholders. The merger faces pushback from certain holders of NRCG's 7.0% Series A Convertible Preferred Stock who have asked NRCG to reconsider the terms for conversion of the preferred stock. We have

incorporated the contribution from NRCG in our model assuming 31 Dec 2019 deal closure (see: [Updating model for NRCG merger](#)).

Figure 32: Environmental Services EPS estimates

Company	Ticker	Quarterly				Annual		
		Scheduled			UBS			UBS
		Reporting	2Q19E	2Q19E	Vs.	2019E	2019E	Vs.
		Date	UBS	Consensus	Consensus	UBS	Consensus	Consensus
ENVIRONMENTAL SERVICES								
Republic Services	RSG	July 25	\$0.76	\$0.77	(\$0.01)	\$3.27	\$3.23	\$0.04
Covanta Holding Corp	CVA	July 25	(\$0.07)	(\$0.05)	(\$0.02)	\$0.16	\$0.22	(\$0.06)
Waste Connections	WCN	July 29	\$0.67	\$0.69	(\$0.02)	\$2.71	\$2.75	(\$0.04)
Clean Harbors	CLH	July 31	\$0.61	\$0.61	(\$0.00)	\$1.77	\$1.78	(\$0.01)
Casella Waste System	CWST	Aug 1	\$0.32	\$0.27	\$0.05	\$1.01	\$0.85	\$0.16
US Ecology	ECOL	Aug 1	\$0.58	\$0.61	(\$0.02)	\$2.27	\$2.24	\$0.03

Source: Company reports, Factset, UBS research estimates.

Figure 33: Environmental Services EBITDA estimates (\$mn)

Company	Ticker	Scheduled Reporting Date	Quarterly			Annual		
			1Q19E	1Q19E	UBS	2019E	2019E	UBS
			UBS	Consensus	Vs. Consensus	UBS	Consensus	Vs. Consensus
ENVIRONMENTAL SERVICES								
Republic Services	RSG	July 25	722	725	-0.4%	2,972	2,955	0.6%
Covanta Holding Corp	CVA	July 25	98	101	-2.8%	444	452	-1.7%
Waste Connections	WCN	July 29	426	431	-1.1%	1,708	1,717	-0.5%
Clean Harbors	CLH	July 31	151	146	3.7%	530	526	0.8%
Casella Waste System	CWST	Aug 1	43	41	3.2%	159	156	2.3%
US Ecology	ECOL	Aug 1	35	36	-3.2%	139	140	-0.5%

Source: Company reports, Factset, UBS research estimates.

Valuation Method and Risk Statement

Regulated Utilities: Our valuation methodology for the group is price to earnings based. The adjustments applied fall into 5 categories. These are as follows: 1) **Group Valuation Bias:** Flowing from our valuation work comparing Baa corporate yields to group dividend yields and RU price to earnings ratios to those for the S&P 500, we incorporate a positive or negative adjustment to our group multiple representing the gap we calculate to the nearest 5%; 2) **Growth Adjustment:** We adjust our valuations based on the growth quartile each utility occupies. First quartile receives a 5% premium, second quartile a 2% premium, third quartile a 2% discount and fourth quartile a 5% discount; 3) **Regulatory Adjustment:** Our valuation adjustments for regulation are based on our proprietary Regulatory Rankings. First quartile jurisdictions receive 5%, second quartile 2%, third quartile -2% and fourth quartile -5%; 4) **Multi Utility Diversified Valuation:** For multi utilities (those with more than 15% diversified or foreign earnings), we perform a sum-of-parts analysis applying business/region appropriate valuations to those diversified businesses; 5) **One-off Adjustments:** In special situations, we value risk on an issue specific basis. Common areas where we apply such an adjustment include: ESG advantage, large project construction risk, legal risk, and announced M&A completion risk. We identify the following risk factors for the sector overall: rising interest rates; regulatory and policy risks; operational risks; construction risks; cybersecurity risk to the transmission grid and/or customer data, and extreme weather events.

Our valuation methodology for the Alternative Energy space is based on a variety of metrics including P/BV, EV/EBITDA, P/E, and retained equity value per share. Our target multiples are derived from historical group averages with adjustments for expected growth rates, leverage, and earnings growth confidence. We identify the following risks for the sector: Demand for new renewable installations has historically been volatile around changes in state and federal policy, and we expect this volatility to continue. In addition, margins for product manufacturers can be impacted by swings in raw materials pricing and the overall level of energy prices.

Our valuation methodology for the Environmental Services space is based on EV/EBITDA with adjustments made to the target EV/EBITDA multiple based on relative growth rates, Free Cash Flow (FCF) conversion, expected earnings stability, and the general level of risk and our confidence in future earnings estimates. We identify the following risks for the sector: Housing remains a key driver of incremental municipal solid waste volume growth, and a slowdown in new housing starts could put downward pressure on sales growth. In addition, pricing tends to follow GDP growth, and a slowdown in economic growth could drive lower ability to raise pricing driving potential contraction in margins. For more industrial-exposed names, swings in commodity prices can impact the overall level of waste-generating activity, contributing to earnings volatility.

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Buy	FSR is > 6% above the MRA.	45%	30%
Neutral	FSR is between -6% and 6% of the MRA.	40%	28%
Sell	FSR is > 6% below the MRA.	15%	20%
Short-Term Rating	Definition	Coverage ³	IB Services ⁴
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%

Source: UBS. Rating allocations are as of 30 June 2019.

1: Percentage of companies under coverage globally within the 12-month rating category.

2: Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

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Company Disclosures

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
AES Corp ¹⁶	AES.N	Neutral	N/A	US\$17.22	19 Jul 2019
Alliant Energy Corp ¹⁶	LNT.O	Neutral	N/A	US\$49.93	19 Jul 2019
Ameren Corp ¹⁶	AEE.N	Neutral	N/A	US\$75.98	19 Jul 2019
American Electric Power Inc ^{7, 13, 16}	AEP.N	Buy	N/A	US\$90.28	19 Jul 2019
American States Water Co ¹⁶	AWR.N	Sell	N/A	US\$76.02	19 Jul 2019
American Water Works Co ¹⁶	AWK.N	Buy	N/A	US\$114.98	19 Jul 2019
Aqua America Inc ¹⁶	WTR.N	Buy	N/A	US\$41.00	19 Jul 2019
ATCO Ltd	ACOX.TO	Buy	N/A	C\$43.24	19 Jul 2019
California Water Service Group ¹⁶	CWT.N	Sell	N/A	US\$52.60	19 Jul 2019
Canadian Solar Inc ^{6c, 7, 13, 16, 20a}	CSIQ.O	Neutral (CBE)	N/A	US\$20.94	19 Jul 2019
Canadian Utilities Ltd	CU.TO	Neutral	N/A	C\$35.78	19 Jul 2019
Caribbean Utilities Corp	CUPU.TO	Neutral	N/A	US\$16.35	19 Jul 2019
Casella Waste Systems Inc ^{2, 4, 6a, 16}	CWST.O	Neutral	N/A	US\$42.15	19 Jul 2019
Clean Harbors Inc ¹⁶	CLH.N	Neutral	N/A	US\$70.99	19 Jul 2019
CMS Energy Corp ¹⁶	CMS.N	Neutral	N/A	US\$58.26	19 Jul 2019
Connecticut Water Service Inc ¹⁶	CTWS.O	Sell	N/A	US\$69.57	19 Jul 2019
Consolidated Edison Inc ¹⁶	ED.N	Neutral	N/A	US\$87.24	19 Jul 2019
Covanta Holding Corp ^{4, 16}	CVA.N	Neutral	N/A	US\$17.54	19 Jul 2019
Dominion Energy Inc ^{6c, 7, 16, 26a}	D.N	Buy	N/A	US\$76.85	19 Jul 2019
DTE Energy Co ^{7, 16}	DTE.N	Neutral	N/A	US\$128.79	19 Jul 2019
Duke Energy Corp ^{4, 6a, 7, 16}	DUK.N	Buy	N/A	US\$88.45	19 Jul 2019
Edison International ^{7, 16}	EIX.N	Buy	N/A	US\$70.17	19 Jul 2019
Entergy Corp ^{7, 16}	ETR.N	Buy	N/A	US\$105.60	19 Jul 2019
Evergy, Inc ¹⁶	EVRG.N	Neutral	N/A	US\$60.79	19 Jul 2019
Eversource Energy ^{7, 16}	ES.N	Buy	N/A	US\$76.77	19 Jul 2019
Exelon Corp ^{7, 16}	EXC.N	Buy	N/A	US\$47.57	19 Jul 2019
First Solar Inc ¹⁶	FSLR.O	Buy	N/A	US\$66.53	19 Jul 2019
FirstEnergy Corp ¹⁶	FE.N	Buy	N/A	US\$43.49	19 Jul 2019
Fortis Inc ^{7, 16}	FTS.TO	Buy	N/A	C\$51.58	19 Jul 2019
Hannon Armstrong Sustainable Infra ^{2, 4, 6a, 13, 16}	HASI.N	Neutral	N/A	US\$27.53	19 Jul 2019
Hawaiian Electric Industries Inc ¹⁶	HE.N	Sell	N/A	US\$44.31	19 Jul 2019
Hydro One	H.TO	Sell	N/A	C\$23.35	19 Jul 2019
JinkoSolar Holding Co Ltd ^{13, 16}	JKS.N	Neutral	N/A	US\$20.23	19 Jul 2019
NextEra Energy Inc ^{2, 4, 6a, 7, 16, 26c}	NEE.N	Buy	N/A	US\$209.73	19 Jul 2019
NRG Energy Inc ^{7, 16}	NRG.N	Buy	N/A	US\$35.14	19 Jul 2019
OGE Energy Corp ¹⁶	OGE.N	Neutral	N/A	US\$42.74	19 Jul 2019
Ormat Technologies Inc ¹⁶	ORA.N	Neutral	N/A	US\$63.15	19 Jul 2019
PG&E Corp ^{7, 16, 20b}	PCG.N	Neutral (CBE)	N/A	US\$17.79	19 Jul 2019
Pinnacle West Capital Corp ^{7, 16}	PNW.N	Neutral	N/A	US\$93.59	19 Jul 2019
PNM Resources Inc ^{7, 16}	PNM.N	Neutral	N/A	US\$49.62	19 Jul 2019
Portland General Electric Co ¹⁶	POR.N	Sell	N/A	US\$54.61	19 Jul 2019

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
PPL Corp ^{4, 6a, 6b, 6c, 7, 16}	PPL.N	Buy	N/A	US\$30.17	19 Jul 2019
Public Service Enterprise Group ^{7, 16}	PEG.N	Buy	N/A	US\$60.18	19 Jul 2019
Republic Services Inc ^{13, 16, 26b}	RSG.N	Neutral	N/A	US\$87.11	19 Jul 2019
Sempra Energy ^{4, 6a, 6c, 7, 16}	SRE.N	Buy	N/A	US\$140.05	19 Jul 2019
SJW Group ^{2, 4, 6a, 16}	SJW.N	Neutral	N/A	US\$64.77	19 Jul 2019
SolarEdge Technologies Inc ¹⁶	SEDG.O	Buy	N/A	US\$63.37	19 Jul 2019
Southern Co ^{2, 4, 6a, 6b, 7, 16}	SO.N	Neutral	N/A	US\$55.27	19 Jul 2019
SunPower Corp ^{13, 16, 20a}	SPWR.O	Neutral (CBE)	N/A	US\$10.99	19 Jul 2019
Sunrun Inc ^{16, 20a}	RUN.O	Neutral (CBE)	N/A	US\$19.77	19 Jul 2019
TPI Composites Inc ¹⁶	TPIC.O	Buy	N/A	US\$26.22	19 Jul 2019
US Ecology Inc ¹⁶	ECOL.O	Neutral	N/A	US\$62.24	19 Jul 2019
Vistra Energy Corp ^{2, 4, 6a, 16}	VST.N	Buy	N/A	US\$21.83	19 Jul 2019
Waste Connections Inc ¹⁶	WCN.TO	Buy	N/A	C\$123.55	19 Jul 2019
Waste Connections Inc ¹⁶	WCN.N	Buy	N/A	US\$94.58	19 Jul 2019
WEC Energy Group Inc ¹⁶	WEC.N	Neutral	N/A	US\$86.31	19 Jul 2019
Xcel Energy Inc ¹⁶	XEL.O	Neutral	N/A	US\$60.77	19 Jul 2019

Source: UBS. All prices as of local market close.

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